THE CLAIMS

What is claimed is:

1. A bacterial strain of the B. subtilis group, wherein one or more genes involved in the biosynthesis of isovaleric acids have been modified such that the strain cannot produce substantial amounts of iso-valeric acids.

2. The B. subtilis strain of claim 1, which is B. natto and which does not produce taste perceptible amounts of iso-valeric acids.

3. The B. subtilis strain of claim 1, wherein the modified gene(s) have a reduced activity, are essentially non-functional or are missing.

4. The B. subtilis strain of claim 3, wherein the modified gene(s) is derived from the *ywfL* gene.

5. The B. subtilis strain of claim 1, that contains no exogeneous DNA sequences.

6. The B. subtilis strain of claim 1, prepared by recombinant gene technology.

7. The B. subtilis strain of claim 6, which is B. natto I-2077.

8. The B. subtilis strain of claim 1, prepared by mutagenesis and selection.

9. A method for improving flavor characteristics of a fermented plant material by fermenting the plant material with a bacterial strain of the B. subtilis group that does not produce substantial amounts of iso-valeric acids.

10. The method of claim 9, wherein the bacterial strain includes one or more genes involved in the biosynthesis of isovaleric acids that have been modified such that the strain cannot produce iso-valeric acids.

11. The method of claim 9, wherein the strain is B. natto and no taste perceptible amounts of iso-valeric acids are produced.

12. The method of claim 9, wherein the fermented plant material is used for the preparation of foodstuff.

13. The method of claim 9, wherein the fermented plant material is used for the preparation of a flavoring agent.

14. The method of claim 10, wherein the plant material is beans and the fermented plant material is used for the preparation of Natto.